

International Publication Trends in the Traumatic Stress Literature

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This analysis looked at international publication trends in the field of trauma by examining first author affiliations of over 13,000 trauma publications from 1987 to 2001. Searches were conducted using the Published International Literature on Traumatic Stress (PILOTS) database to determine frequency of international contributions. A similar search of the *Journal of Traumatic Stress (JTS)* was also conducted. Although the majority of trauma research comes from investigators in North America, examining publication trends over time revealed that trauma research is becoming increasingly international in its representation. Results suggest that of the overall trauma literature, 36% of contributions come from authors outside North America. Likewise, among *JTS* publications over the first 14 years of circulation, 27% came from authors outside North America. More recent publication years reflect higher levels of international contributions for both sources. The majority of trauma research published over the 15-year span was in English. Implications for the field of traumatic stress research are discussed.

KEY WORDS: trauma; publication trends; authorship; international.

Traumatic events occur globally, crossing religious, political, and geographical borders. In the recent past we have seen many occurrences of trauma on a mass scale. The terrorist attacks on 11 September, the Sarin gas attacks in Japan, a series of terrorist attacks in the Middle East, and massive earthquakes in Italy, Colombia, and India are a few such events. In addition, with the increasing international threat of terrorist attacks, researchers and clinicians have taken on a new awareness of the global impact of trauma. With this new interest comes an increased need for research to originate from all cultures and societies.

The impact and value of a body of literature may in part be assessed by the number of authors publish-

ing from different countries (Matson, Matson, Lott, & Logan, 2002). Indeed, international contributions to research enhance diversity of topics and perspectives in the field. Authors publishing from their own countries may demonstrate increased sociocultural sensitivity, which can impact research design, diversity of studied populations, and depth of presentation. Although the breadth of international representation has been investigated in broad fields of study, (e.g., psychology, psychiatry, and mental retardation; Bauserman, 1997; Dymond, Clarke, Dunlap, & Steiner, 2000; Matson et al., 2002; Patel & Sumathipala, 2001), to date no such analysis has been conducted in the field of trauma specifically.

In his 2001 editorial note, Dr. Kilpatrick cited international *subscriptions* as one measure of the success of this journal (Kilpatrick, 2001). We agree and take this idea one step further to say that worldwide *authorship* representation is also of great importance and is indicative of the international interest in a journal. In this report, we review 13,865 articles from the last 15 years, as indexed by the PILOTS (Published International Literature

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on Traumatic Stress) database, to examine international authorship affiliation trends in trauma-related research. In addition, we examine international publications in the *Journal of Traumatic Stress (JTS)*—one of the most prominent journals in trauma research. Here, we provide a descriptive report that catalogues international authorship trends, and language of publication for the field of trauma.

Method

International publication trends were examined first, by recording the first author institutional affiliations of journal articles published on trauma. Second, language of publication was determined, and publications in English were compared to the frequency of those published in other languages. Third, international authorship trends in *JTS* were explored and compared to the more general trauma search.

We examined international authorship trends for the years 1987–2001 for publications identified as journal articles on traumatic stress. These searches were conducted using the PILOTS database, an online resource sponsored by the National Center for Posttraumatic Stress Disorder (NCPTSD). PILOTS categorizes all original empirical works, theoretical articles, and commentaries on the topic of traumatic stress to be a “journal article.” The database contains over 22,000 citations specifically on trauma research. The PILOTS database was selected for a variety of reasons. First, it does not limit its citations to those from selected journals, but instead has a goal of including all articles published on traumatic stress. Second, because PILOTS cites only traumatic stress work, it is more inclusive of trauma research than broader discipline wide databases such as PsycInfo or PubMed (www.ncptsd.org). As such, PILOTS can be considered the most comprehensive international catalogue of publications on traumatic stress.

Using the results from our search, the first author’s institutional affiliation for each citation was extracted and coded by country. Because of the large diversity of countries represented, the author affiliations were then categorized into geographical areas on the basis of the world macro regions as currently defined by the United Nations (UN; www.un.org). The UN divides countries into 21 mutually exclusive regions on the basis of geographic location. We then condensed these 21 regions into six continental summary areas to increase ease of description. The 21 UN regions were grouped into the following six geographic regions: North America (includes countries designated by the UN as North America), Europe (includes countries designated by the UN as southern Europe, north-

ern Europe, eastern Europe and western Europe), Asia (includes countries designated by the UN as western Asia, South Central Asia, southeastern Asia, and eastern Asia), Australia and New Zealand (includes countries designated by the UN as Australia, New Zealand, and Melanesia), Africa (includes countries designated by the UN as eastern Africa, northern Africa, and southern Africa), and South-Central America (includes countries designated by the UN as South America and Central America). The UN-defined regions of middle Africa, western Africa, Latin America, and Polynesia were not included in our summary regions since no trauma publications were found to have originated from these regions. Results were then tabulated and compared across years by geographic affiliation of the first author. Articles were also coded for publication language to examine the representation of languages over the 15 years. A search of first author affiliations in *JTS* was conducted for journal articles published between 1988 (the first year of *JTS* circulation) and 2001. Results from the *JTS* search were coded by country, area, and summary region and compared with findings from the entire PILOTS database. Because *JTS* publishes only in English, the language analysis was not repeated.

Results

Trauma Literature—International Publication Trends

PILOTS reports 13,865 journal articles on trauma published between 1987 and 2001—94% (13,051) of which were published in English. Results show that first authors with affiliations in North America publish the majority of trauma literature, comprising 63.8% of the 13,865 articles found from 1987 to 2001. Table 1 shows the summary region geographic distribution of author affiliations for the 15-year time period. Results are presented for all publications and then separately for articles published in English. (For a complete listing of the contributions of individual countries please contact the corresponding author for a reference guide of all countries sorted by UN macro regions.) From 1987 to 2001 the frequency of articles from outside of North America have steadily increased. The frequency of international contributions of the six summary regions is represented graphically in Fig. 1.

In addition, results show that the number of world areas represented in trauma research has increased over the 15 years. Specifically, in 1987 authors from 10 UN world regions and 18 countries were represented compared to 13 UN regions and 44 countries in 2001.

Table 1. Frequency and Percentage of Author Affiliations for PILOTS and JTS

Country	PILOTS Total (1987–2001)		PILOTS English only (1987–2001)		JTS (1988–2001)	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Northern America	8845	63.79	8806	67.47	495	73.77
Europe	2642	19.06	2053	15.73	76	11.33
Asia	725	5.22	685	5.25	59	8.79
Australia and New Zealand	591	4.26	589	4.51	34	5.07
Africa	84	0.61	82	0.63	5	0.75
Central/South America	30	0.22	15	0.11	0	0.00
Missing	948	6.84	821	6.29	2	0.30
Total	13865	100	13051	100	671	100

Trauma Literature—Publication Language

The search by publication language revealed that from 1987 to 2001, 814 articles (6% of PILOTS total) were published on trauma in languages other than English. Twenty-three languages were represented, incorporating those of African, Asian, and European origin. Table 2 depicts the distribution of languages other than English for 1988–2001. The majority of countries contributing to trauma research with publications in languages other than English are from western Europe (410 publications, 59.7% of non-English publications).

JTS Publications

Finally, publications from JTS were analyzed and compared with the more general PILOTS results. The

search revealed that 671 articles were published by JTS in the 14 years examined (1988–2001), with 74% affiliated with first authors from North America. Frequency of authorship by summary region is presented in Table 1. The proportion of publications that are international has increased over the last 14 years in JTS, from a low of 7.4% in 1988 to a high of 34.5% in 1999—the highest yearly representation of authors from outside North America.

Discussion

Results of this analysis show that first authors with affiliations in North America publish the majority of trauma research articles. However, there is a trend toward an increase in publications by authors with affiliations outside of North America over the past 15 years. Similarly, publications in JTS most often have first authors from

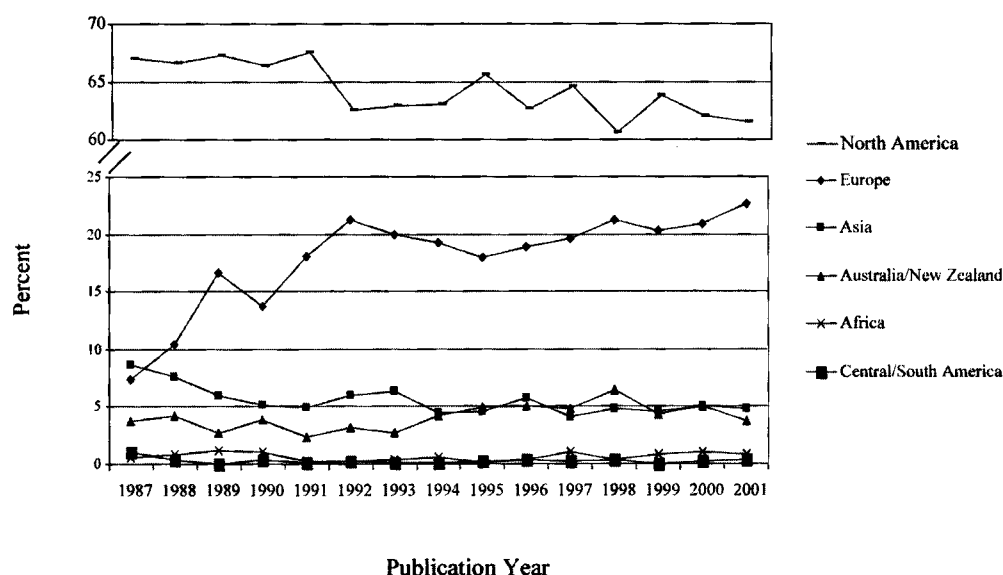


Fig. 1. Author affiliation publication trends for trauma search in PILOTS.

Table 2. Language Representation for 1987–2001 in Trauma Research

Language	Percentage of non-English language publications
French	27.76
German	25.43
Dutch	8.48
Spanish	5.77
Russian	5.65
Danish	4.30
Swedish	4.30
Norwegian	3.93
Serbian–Croatian	3.07
Hebrew	2.95
Japanese	2.70
Italian	1.60
Polish	1.35
Czech	0.74
Finnish	0.74
Hungarian	0.25
Portuguese	0.25
Afrikaans	0.12
Arabic	0.12
Chinese	0.12
Slovenian	0.12
Missing	0.25
Total	100

North America. However, in *JTS* as well, international authorship has steadily increased from 1988 to 2001. Considering the global nature of trauma, awareness of the finding that English speaking scientists and practitioners are most often exposed to authors publishing from one distinct geographic and cultural area is important. These results are similar to those found in other disciplines such as general psychology (Bauserman, 1997), psychiatry (Patel & Sumathipala, 2001), and social work (Greif, in press). The increased trend of international representation is encouraging. Both the number of countries from which authors are publishing and the frequency of articles published by authors outside of North America are growing, indicating that English speaking researchers are increasingly being informed by research from more diverse geographic representation.

Representation of first authors from northern Europe, Australia/New Zealand, and western Europe has increased consistently over the past 15 years. Although this suggests that geographic representation is rising, there is still a disproportionate amount of research coming from industrialized regions of the world. Developing countries, such as those in Asia, Africa, and southern Europe, still have low representation. These results are consistent with findings from broader examinations across the behavioral sciences.

With respect to language, a few interesting things can be noted. PILOTS yielded 6% of total search results in languages other than English. In contrast PsycLit, a

general behavioral science search engine, yielded twice that many (an average of 14.0%) throughout the 1980s (Bauserman, 1997). This difference can be interpreted in two ways. First, it might suggest that trauma work is less often published in other languages than research in different areas of the behavioral sciences. The second alternative is that the PILOTS database is less representative of international languages than the search engine PsycLit. Either explanation suggests trauma research is less accessible to non-English speaking international researchers relative to other disciplines.

It appears that few of the world's languages were represented in our search. Most of the languages highly contributing are those of industrialized western nations. Indeed, the most significant non-English effect is seen in the contributions of western Europe, where nearly half the publications are published in a language other than English. These results suggest that most research is in fact originating from Western nations and that there is a strong tendency to publish in English.

Results show that broad trauma research indexed by PILOTS represents more international authors (32.5% of English articles) than does *JTS* (26.2% of articles). In addition, PILOTS represents more regions of the world than does *JTS* for almost equivalent time periods. However, the recent increase in international research published by *JTS* parallels that of the broader trauma field.

There are many potential reasons why research manuscripts from given regions of the world may be published less often in journals cited by PILOTS or in *JTS*. Bauserman (1997) suggested that similar results for the general field of psychology were related to the higher popularity of psychology as a discipline in industrialized nations, and to psychologists in developing nations necessarily having to devote their time and resources to non-research activities. Bauserman's comments may generalize to the field of trauma. Certain regions of the world may produce less publications because of fewer trauma researchers, less time available for research pursuits, relatively lower research funding budgets by government agencies, and more value placed on practice-oriented work, among other explanations. In addition, the scientific and technical merit of publications produced by authors from some regions may differ from those espoused by English speaking journals because of education and training disparities. If fewer international manuscripts are available for publication, it could be difficult for journals to maintain high levels of articles developed by authors from particular diverse regions. Despite the best efforts of many journal editors and reviewers in assisting international authors with developing and preparing manuscripts, this remains a challenge.

In addition, PILOTS database and *JTS* are designed for English speaking audiences. Although PILOTS includes journals published in many languages, the fact that it was developed and produced in the United States raises the possibility that it is unintentionally partial toward English-speaking researchers. Finally, the search conducted using PILOTS and *JTS* looked solely at the first author affiliations of each article. Therefore, when first authors collaborated with authors from other countries, the influence of this collaboration was not captured in the data presented above. Likewise, author affiliations were examined to determine international contributions to the field. These results do not comment on the populations or regions that were subject to investigation.

Overall the results suggest two trends in authorship. First, the majority of research published on trauma is coming from North America. However, the second trend suggests that, over the 15-year span examined, there has been a fairly consistent annual increase in representation of first authors publishing from countries outside of North America. This increase was evident both in the search of the general trauma literature and also in the search of *JTS*. To further increase the breadth and diversity of literature in this area international authors should continue to be encouraged to submit their empirical work for publication. The field of trauma research is an important discipline that

is continuing to evolve, and improvements toward an increased international publication base for trauma research are emerging. Results are encouraging since the work of authors publishing from diverse geographic locations substantially enhances the field's understanding of the impact of trauma across the world.

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